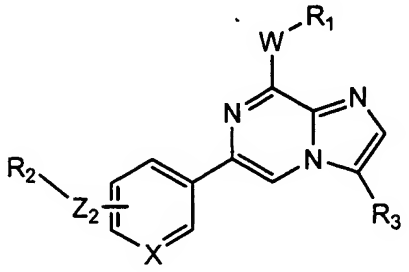
AMENDMENTS TO THE CLAIMS

1. (Original) A compound having Formula 1:



(Formula 1)

or pharmaceutically-acceptable form thereof, wherein:

R_1 is hydrogen, halogen, C_1-C_7alkyl, C_1-C_6alkoxy, C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), sulfonamide, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, mono- or di-(C_1-C_6alkyl)amino, or mono- or di-(C_1-C_6alkyl)amino(C_1-C_6alkyl); or

R_1 is phenyl or phenyl fused to a 5 to 7-membered heterocycloalkyl ring containing 1 or 2 heteroatoms chosen from N, O, and S, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, C_1-C_6alkylthio, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and –C(O)R_{13} where R_{13} is C_1-C_3haloalkyl, phenyl, heterocycloalkyl, or heteroaryl;

W is phenyl or a 5- or 6-membered heteroaryl containing from 1 to 4 heteroatoms independently chosen from nitrogen, oxygen, and sulfur; wherein W is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, oxo, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl;

X is N or CH;

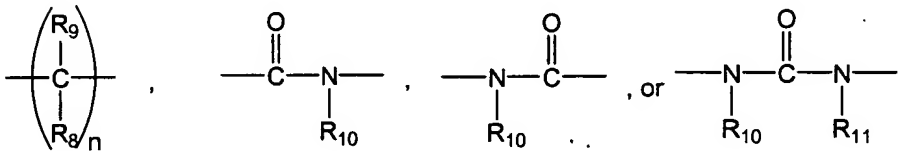
R_2 is C_1-C_7alkyl, C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, or (C_1-C_6alkoxy)C_1-C_6alkoxy; or

R_2 is phenyl(C_0-C_2alkyl) or heteroaryl(C_0-C_2alkyl), each of which is substituted with 0 to 3 substituents independently chosen from

(i) hydroxy, halogen, nitro, cyano, amino, sulfonamide, -CHO, C_1-C_6haloalkyl, and C_1-C_6haloalkoxy,and

(ii) C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, heterocycloalkyl(C_0-C_2alkyl), and –C(O)R_{13}; each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, nitro, cyano, C_1-C_4alkoxy, C_3-C_7cycloalkyl, and mono- and di-(C_1-C_4alkyl)amino;

Z_2 is



wherein

R_8 and R_9 are independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, or halogen; and n is 0, 1, or 2;

R_{10} and R_{11} are independently

(iii) hydrogen or C_1-C_6alkyl; or

(iv) phenyl or heteroaryl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and –C(O)R_{13};

R_3 is hydrogen or C_1-C_6alkyl, or

R_3 is C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), phenyl, or heteroaryl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro,

cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6 alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and –C(O)R_{13}; or

R_3 is phenoxy phenyl, each of which phenyl rings is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and –C(O)R_{13}.

2. (Currently Amended) A compound or form thereof according to Claim 1, wherein

R_1 is hydrogen, halogen, C_1-C_7alkyl, C_1-C_6alkoxy, C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), sulfonamide, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, mono- or di-(C_1-C_6alkyl)amino, or mono- or di-(C_1-C_6alkyl)amino(C_1-C_6alkyl); or

R_1 is phenyl substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl;

W is phenyl or a 5- or 6-membered heteroaryl ring; substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, oxo, C_1-C_6alkyl; C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl;

X is N or CH;

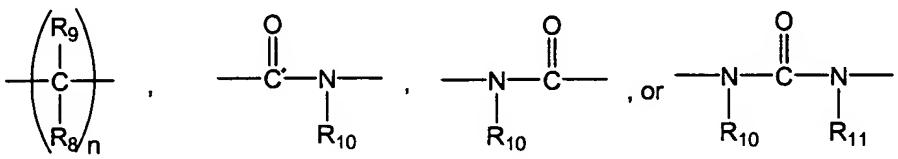
R_2 is C_1-C_7alkyl, C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, or (C_1-C_6alkoxy)C_1-C_6alkoxy; or

R_2 is phenyl(C_0-C_2alkyl) or 5- or 6-membered heteroaryl(C_0-C_2alkyl), each of which is substituted with 0 to 3 substituents independently chosen from

(i) hydroxy, halogen, nitro, cyano, amino, sulfonamide, -CHO, C_1-C_6haloalkyl, and C_1-C_6haloalkoxy, and

(ii) C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and heterocycloalkyl(C_0-C_2alkyl); each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, nitro, cyano, C_1-C_4alkoxy, C_3-C_7cycloalkyl, and mono- and di-(C_1-C_4alkyl)amino;

Z_2 is



wherein

R_8 and R_9 are independently hydrogen, C_1-C_6alkyl, C_1-C_6alkoxy, or halogen; and n is 0, 1, or 2;

R_{10} and R_{11} are independently

(iii) hydrogen or C_1-C_6alkyl; or

(iv) phenyl or a 5- or 6 membered heteroaryl ring, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl;

R_3 is hydrogen or C_1-C_6alkyl, or

R_3 is C_3-C_7cycloalkyl(C_0-C_2alkyl), heterocycloalkyl(C_0-C_2alkyl), phenyl, or a 5- or 6-membered heteroaryl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-

C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl; or

R_3 is phenoxy phenyl, each of which phenyl rings is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl.

3. (Currently Amended) A compound or form thereof according to Claim ~~1 or~~ 2 wherein

R_1 is halogen, C_1-C_7alkyl, C_1-C_6alkoxy, C_3-C_7cycloalkyl(C_0-C_2alkyl), or heterocycloalkyl(C_0-C_2alkyl); or

R_1 is phenyl substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl.

4. (Original) A compound or form thereof according to Claim 3 wherein

R_1 is halogen or C_1-C_7alkyl; or

R_1 is phenyl substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, halogen, C_1-C_6alkyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_2haloalkyl, C_1-C_2haloalkoxy, and mono- and di-(C_1-C_4alkyl)amino.

5. (Original) A compound or form thereof according to Claim 4 wherein

R_1 is phenyl substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, halogen, C_1-C_4alkyl, C_1-C_4alkoxy, C_1-C_2haloalkyl, C_1-C_2haloalkoxy, and mono- and di-(C_1-C_4alkyl)amino.

6. (Original) A compound or form thereof according to Claim 4 wherein

R_1 is bromo or C_1-C_4alkyl; or

R_1 is phenyl substituted with 0 to 2 substituents independently chosen from fluoro, chloro, bromo, C_1-C_2alkyl, and C_1-C_2alkoxy.

7. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to~~ Claim 6 wherein

W is phenyl, pyridyl, pyrimidinyl, imidazolyl, pyrrolyl, pyrazolyl, furanyl, thienyl, oxazolyl, or isoxazolyl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, sulfonamide, -CHO, halogen, oxo, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkyl, C_1-C_6haloalkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), and C_2-C_6alkanoyl.

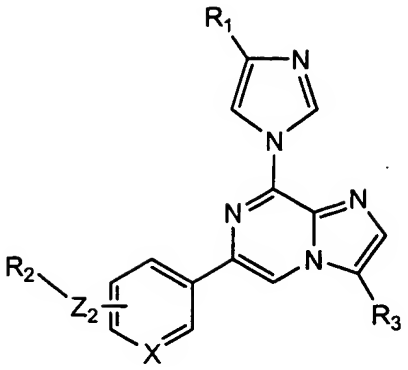
8. (Original) A compound or form thereof according to Claim 7 wherein

W is phenyl, pyridyl, pyrimidinyl, imidazolyl, pyrrolyl, pyrazolyl, furanyl, thienyl, oxazolyl, or isoxazolyl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, halogen, oxo, C_1-C_4alkyl, C_1-C_4alkoxy, C_1-C_2haloalkyl, C_1-C_2haloalkoxy, and mono- and di-(C_1-C_4alkyl)amino.

9. (Original) A compound or form thereof according to Claim 8, wherein

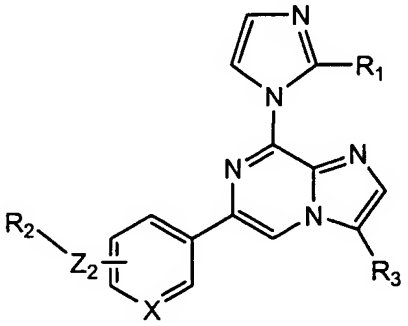
W is imidazolyl, pyrrolyl, or pyrazolyl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, cyano, halogen, oxo, C_1-C_4alkyl, C_1-C_4alkoxy, trifluoromethyl, and trifluoromethoxy.

10. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to~~ Claim 6 of Formula 2



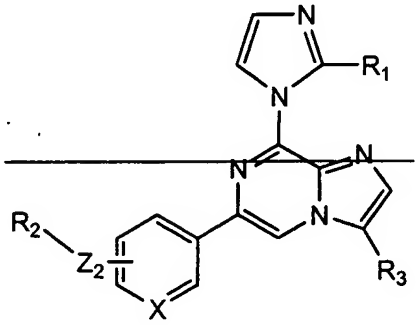
(Formula 2).

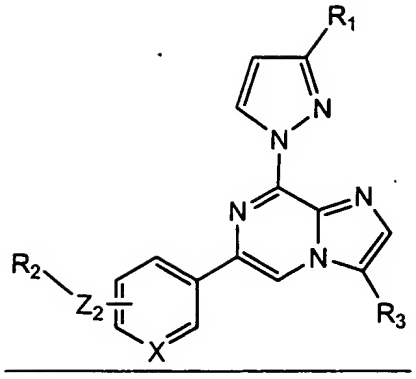
11. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to~~ Claim 6 of Formula 3



(Formula 3).

12. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to~~ Claim 6 of Formula 4:





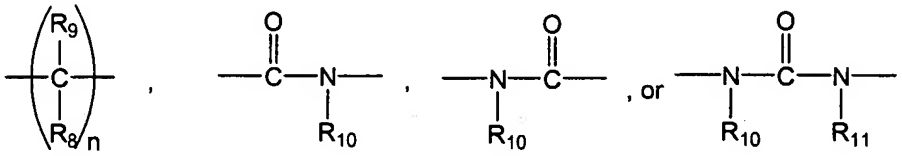
(Formula 4).

13. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 12~~ Claim 11, wherein X is N.

14. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 12~~ Claim 11, wherein X is CH.

15. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 14~~ Claim 9 wherein

Z_2 is



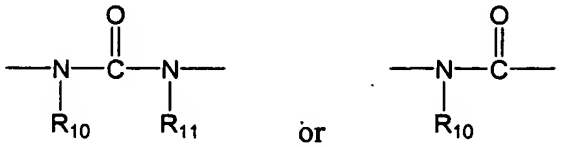
wherein

R_8 and R_9 are independently hydrogen or C_1-C_6alkyl; and n is 0, 1, or 2; and

R_{10} and R_{11} are independently hydrogen, C_1-C_6alkyl, or phenyl.

16. (Original) A compound or form thereof according to Claim 15, wherein

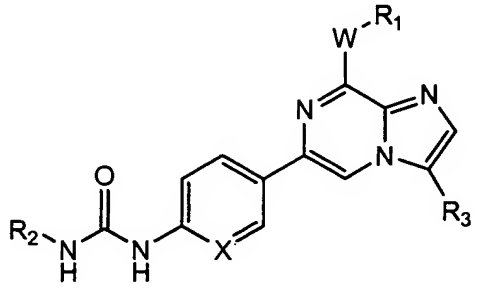
Z_2 is



wherein, R_{10} and R_{11} are independently hydrogen, methyl, or ethyl.

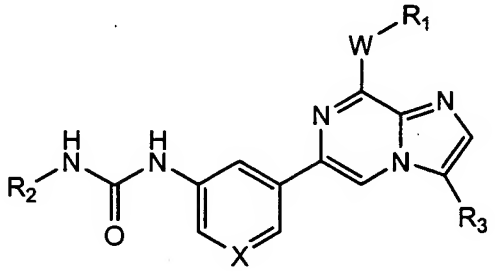
17. (Original) A compound or form thereof according to Claim 16 wherein R_{10} and R_{11} are both hydrogen.

18. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 17~~ Claim 9 of Formula 6



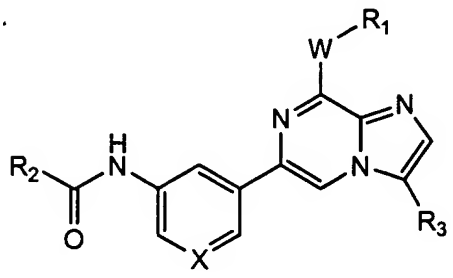
(Formula 6).

19. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 17~~ Claim 9 of Formula 7



(Formula 7).

20. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 17~~ Claim 9 of Formula 8



(Formula 8).

21. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 20~~ Claim 19 wherein

R_2 is phenyl, pyridyl, pyrimidinyl, pyrazinyl, imidazolyl, pyrrolyl, furanyl, thienyl, oxazolyl, or isoxazolyl, each of which may be either directly attached or bound via a C_1-C_2alkyl linker, and each of which is substituted with 0 to 3 substituents independently chosen from:

(i) hydroxy, halogen, nitro, cyano, amino, sulfonamide, -CHO, C_1-C_6haloalkyl, and C_1-C_6haloalkoxy, and

(ii) C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, (C_1-C_6alkoxy)C_1-C_6alkoxy, C_1-C_6alkylthio, mono- and di-(C_1-C_6alkyl)amino, amino(C_1-C_6alkyl), mono- and di-(C_1-C_6alkyl)amino(C_1-C_6alkyl), C_2-C_6alkanoyl, and heterocycloalkyl(C_0-C_2alkyl); each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, nitro, cyano, C_1-C_4alkoxy, C_3-C_7cycloalkyl, and mono- and di-(C_1-C_4alkyl)amino.

22. (Original) A compound or form thereof according to Claim 21, wherein

R_2 is phenyl(C_0-C_2alkyl), pyridyl(C_0-C_2alkyl), or pyrimidinyl(C_0-C_2alkyl), each of which is substituted with 0 to 3 substituents independently chosen from:

(i) hydroxy, halogen, nitro, cyano, amino, C_1-C_2haloalkyl, and C_1-C_2haloalkoxy, and

(ii) C_1-C_6alkyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, (C_1-C_6alkoxy)C_1-C_6alkyl, C_1-C_4alkylthio, mono- and di-(C_1-C_4alkyl)amino, mono- and di-(C_1-C_4alkyl)amino(C_1-C_4alkyl), and heterocycloalkyl(C_0-C_2alkyl); each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, nitro, cyano, C_1-C_4alkoxy, C_3-C_7cycloalkyl, and mono- and di-(C_1-C_4alkyl)amino.

23. (Currently Amended) A compound or form thereof according to Claim ~~25~~ 22, wherein

R_2 is phenyl or benzyl, each of which is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, C_1-C_4alkyl, C_1-C_4alkoxy, C_1-C_4alkylthio, C_1-C_2haloalkyl, and C_1-C_2haloalkoxy.

24. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to~~ Claim 23, wherein

R_3 is hydrogen or C_1-C_6alkyl, or

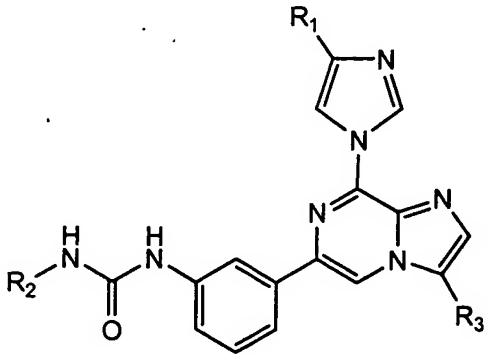
R_3 is C_3-C_7cycloalkyl, (C_3-C_7cycloalkyl)methyl, heterocycloalkyl, (heterocycloalkyl)C_1-C_2alkyl, phenyl, phenyl, pyridyl, pyrimidinyl, pyrazinyl, imidazolyl, pyrrolyl, furanyl, thienyl, oxazolyl, or isoxazolyl, each of which is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, halogen, C_1-C_6alkyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_2haloalkyl, C_1-C_2haloalkoxy, and mono- and di-(C_1-C_4alkyl)amino; or

R_3 is phenoxyphenyl, each of which phenyl rings is substituted with 0 to 3 substituents independently chosen from hydroxy, nitro, cyano, amino, halogen, C_1-C_6alkyl, C_3-C_7cycloalkyl, C_1-C_6alkoxy, C_1-C_2haloalkyl, C_1-C_2haloalkoxy, and mono- and di-(C_1-C_4alkyl)amino.

25. (Original) A compound or form thereof according to Claim 24, wherein R_3 is hydrogen, C_1-C_6alkyl, C_3-C_7cycloalkyl(C_0-C_1alkyl), phenyl, or phenoxyphenyl.

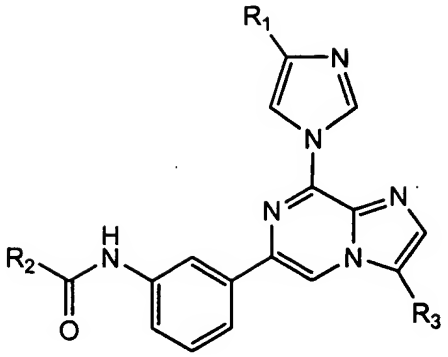
26. (Original) A compound or form thereof according to Claim 25, wherein R_3 is hydrogen or C_1-C_4alkyl.

27. (Original) A compound or form thereof according to Claim 1 of Formula 9



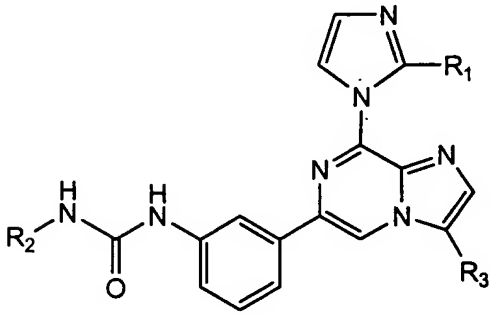
(Formula 9).

28. (Original) A compound or form thereof according to Claim 1 of Formula 10



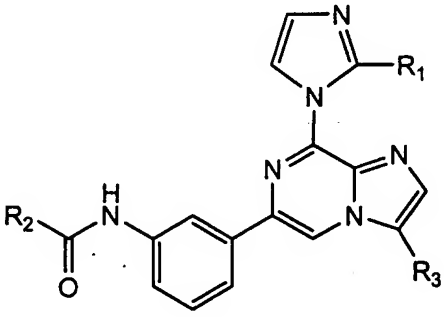
(Formula 10).

29. (Original) A compound or form thereof according to Claim 1 of Formula 11



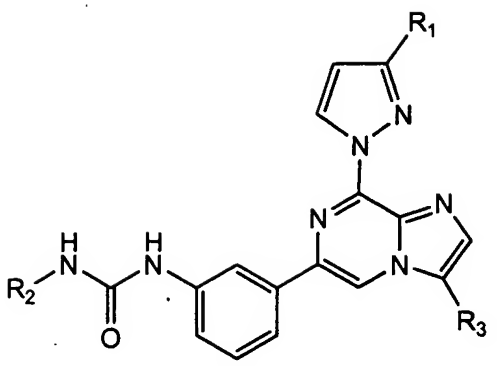
(Formula 11).

30. (Original) A compound or form thereof according to Claim 1 of Formula 12



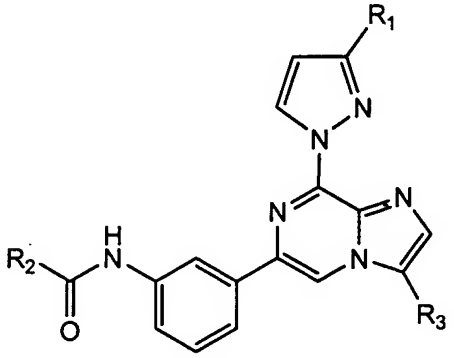
(Formula 12).

31. (Original) A compound or form thereof according to Claim 1 of Formula 13



(Formula 13).

32. (Original) A compound or form thereof according to Claim 1 of Formula 14



(Formula 14).

33. (Currently Amended) A compound or form thereof according to Claim 30 ~~to 32~~, wherein

R_1 is bromo or C_1-C_4alkyl; or

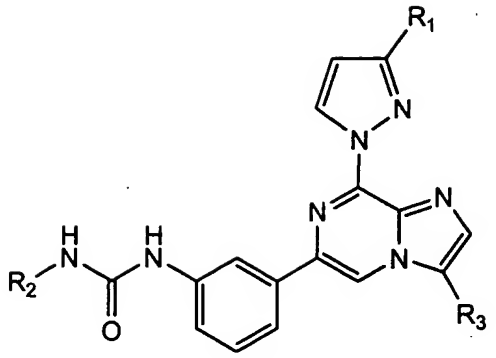
R_1 is phenyl substituted with 0 to 2 substituents independently chosen from fluoro, chloro, bromo, C_1-C_2alkyl, and C_1-C_2alkoxy;

R_2 is phenyl or benzyl, each of which is substituted with 0 to 3 substituents independently chosen from:

(i) hydroxy, halogen, amino, C_1-C_2haloalkyl, and C_1-C_2haloalkoxy, and

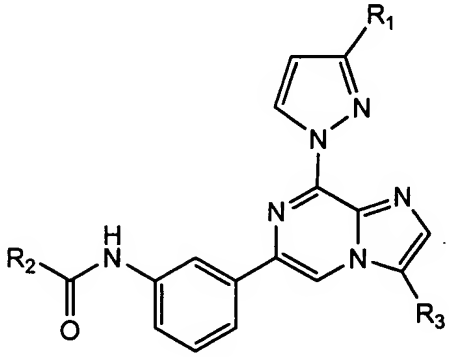
(ii) C_1-C_6alkyl, C_1-C_6alkoxy, mono- and di-(C_1-C_4alkyl)amino, mono- and di-(C_1-C_4alkyl)amino(C_1-C_4alkyl), piperazinyl(C_0-C_1alkyl), piperidinyl(C_0-C_1alkyl), and morpholinyl(C_0-C_1alkyl); each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, C_1-C_2alkoxy, and mono- and di-(C_1-C_4alkyl)amino; and

R_3 is hydrogen or C_1-C_4alkyl.



(Formula 13).

32. (Original) A compound or form thereof according to Claim 1 of Formula 14



(Formula 14).

33. (Currently Amended) A compound or form thereof according to Claim 30 ~~to 32~~, wherein

R_1 is bromo or C_1-C_4alkyl; or

R_1 is phenyl substituted with 0 to 2 substituents independently chosen from fluoro, chloro, bromo, C_1-C_2alkyl, and C_1-C_2alkoxy;

R_2 is phenyl or benzyl, each of which is substituted with 0 to 3 substituents independently chosen from:

(i) hydroxy, halogen, amino, C_1-C_2haloalkyl, and C_1-C_2haloalkoxy, and

(ii) C_1-C_6alkyl, C_1-C_6alkoxy, mono- and di-(C_1-C_4alkyl)amino, mono- and di-(C_1-C_4alkyl)amino(C_1-C_4alkyl), piperazinyl(C_0-C_1alkyl), piperidinyl(C_0-C_1alkyl), and morpholinyl(C_0-C_1alkyl); each of which (ii) is substituted with 0 to 3 substituents independently chosen from halogen, hydroxy, amino, C_1-C_2alkoxy, and mono- and di-(C_1-C_4alkyl)amino; and

R_3 is hydrogen or C_1-C_4alkyl.

34. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1, wherein the compound exhibits an IC_{50} of 25 micromolar or less in an in vitro assay of tumor cell proliferation.

35. (Currently Amended) A compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1, wherein the compound exhibits an IC_{50} of 10 micromolar or less in an in vitro assay of tumor cell proliferation.

36. (Currently Amended) A pharmaceutical composition, comprising a compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1, together with at least one pharmaceutically acceptable carrier or excipient.

37. (Original) A pharmaceutical composition according to Claim 36, wherein the composition is formulated as an injectable fluid, an aerosol, a cream, a gel, a tablet, a pill, a capsule, a syrup, ophthalmic solution, or a transdermal patch.

38. (Original) A packaged pharmaceutical composition, comprising

(a) a pharmaceutical composition according to Claim 36 in a container; and

(b) instructions for using the composition to treat a patient suffering from an disease or disorder responsive to Hsp90 complex modulation.

39. (Original) The packaged pharmaceutical composition of Claim 38 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer, an autoimmune disease, or a neurodegenerative disease.

40. (Original) The packaged pharmaceutical composition of Claim 38 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer.

41. (Original) The packaged pharmaceutical composition of Claim 38 wherein the disease or disorder responsive to Hsp90 complex modulation is autoimmune/inflammatory disease.

42. (Original) The packaged pharmaceutical composition of Claim 38 wherein the disease or disorder responsive to Hsp90 complex modulation is neurodegenerative disease.

43. (Original) A method of reducing medication error and enhancing therapeutic compliance of a patient being treated for a disease or disorder responsive to Hsp90 complex modulation, the method comprising providing a packaged pharmaceutical preparation according to Claim 38 wherein the instructions additionally include contraindication and adverse reaction information pertaining to the package pharmaceutical composition.

44. (Currently Amended) A method for modulating binding of ATP to Hsp90 complex, the method comprising contacting cells expressing Hsp90 complex with a compound according to ~~any one of Claims 1 to 33~~ Claim 1 or form thereof in an amount sufficient to detectably decrease the level of an Hsp90 substrate protein *in vitro*.

45. (Currently Amended) A method for modulating the activity of Hsp90 complex, the method comprising contacting cells expressing Hsp90 complex with a compound according to ~~any one of Claims 1 to 33~~ Claim 1or form thereof in an amount sufficient to detectably decrease the level of an Hsp90 substrate protein *in vitro*.

46. (Currently Amended) The method of ~~Claim 44 or~~ Claim 45 wherein the substrate protein is ErbB2, Akt, or Raf.

47. (Original) The method of Claim 46 wherein the cells are present in a mammal.

48. (Original) The method of Claim 47 wherein the mammal is a human.

49. (Original) The method of Claim 47 wherein the mammal is a cat or dog.

50. (Currently Amended) A method for treating a patient having a disease or disorder responsive to Hsp90 complex modulation, comprising administering to the patient and effective amount of a compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1.

51. (Original) The method of Claim 50 wherein the patient is a human.

52. (Original) The method of Claim 50 wherein the patient is a cat or dog.

53. (Original) The method of Claim 50 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer, an autoimmune disease, or a neurodegenerative disease.

54. (Original) The method of Claim 50 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer.

55. (Original) The method of Claim 50 wherein the compound or form is administered orally.

56. (Original) The method of Claim 50 wherein the compound or form is administered intravenously, by intramuscularly, or parenterally.

57. (Currently Amended) A method for determining the presence or absence of Hsp90 complex in a sample comprising contacting the sample with a compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1 under conditions that permit binding of the compound or form to the Hsp90 complex, detecting a level of the compound or form bound to the Hsp90 complex, and therefrom determining the presence or absence of Hsp90 complex.

58. (Original) The method of Claim 57 wherein the compound or form thereof is radiolabelled.

59. (Original) The method of Claim 57, which additionally comprises

50. (Currently Amended) A method for treating a patient having a disease or disorder responsive to Hsp90 complex modulation, comprising administering to the patient and effective amount of a compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1.

51. (Original) The method of Claim 50 wherein the patient is a human.

52. (Original) The method of Claim 50 wherein the patient is a cat or dog.

53. (Original) The method of Claim 50 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer, an autoimmune disease, or a neurodegenerative disease.

54. (Original) The method of Claim 50 wherein the disease or disorder responsive to Hsp90 complex modulation is cancer.

55. (Original) The method of Claim 50 wherein the compound or form is administered orally.

56. (Original) The method of Claim 50 wherein the compound or form is administered intravenously, by intramuscularly, or parenterally.

57. (Currently Amended) A method for determining the presence or absence of Hsp90 complex in a sample comprising contacting the sample with a compound or form thereof according to ~~any one of Claims 1 to 33~~ Claim 1 under conditions that permit binding of the compound or form to the Hsp90 complex, detecting a level of the compound or form bound to the Hsp90 complex, and therefrom determining the presence or absence of Hsp90 complex.

58. (Original) The method of Claim 57 wherein the compound or form thereof is radiolabelled.

59. (Original) The method of Claim 57, which additionally comprises

separating unbound compound from bound compound; and determining the amount of bound compound in the sample.

60. (Original) A compound or form thereof according to Claim 1, wherein the compound is:

1-{3-[8-(4-Phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-3-o-tolyl-urea;

1-(4-Chloro-phenyl)-3-{3-[8-(4-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(2-Methylsulfanyl-phenyl)-3-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-{3-[8-(2-Phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-3-o-tolyl-urea;

1-(4-Chloro-phenyl)-3-(3-{8-[4-(4-chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea;

1-(3-{8-[4-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-o-tolyl-urea;

1-(4-Chloro-phenyl)-3-{3-[8-(4-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-o-Tolyl-3-{3-[8-(4-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(4-Chloro-phenyl)-3-{3-[8-(4-methyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-(3-{8-[4-(4-chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(4-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-{8-[4-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-[4-(4-methyl-piperazin-1-ylmethyl)-phenyl]-urea;

1-(3-{8-[4-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-(4-morpholin-4-ylmethyl-phenyl)-urea;

1-(3-{8-[4-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-{4-[(3-ethoxy-propylamino)-methyl]-phenyl}-urea;

1-(4-Chloro-phenyl)-3-{3-[8-(3-phenyl-pyrazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(3-phenyl-pyrazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

4-Chloro-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

3-Morpholin-4-ylmethyl-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

4-Morpholin-4-ylmethyl-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(2-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-{3-[8-(2-p-Tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-3-(3-trifluoromethyl-phenyl)-urea;

1-(4-Morpholin-4-ylmethyl-phenyl)-3-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

6-(4-Morpholin-4-ylmethyl-phenyl)-8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazine;

1-(4-Chloro-phenyl)-3-{3-[8-(2-o-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(2-o-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(4-Chloro-phenyl)-3-(3-{8-[2-(2-methoxy-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea;

1-(4-Chloro-phenyl)-3-(3-{8-[2-(2-fluoro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-(3-{8-[2-(2-fluoro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea;

1-(3-{8-[2-(2-Fluoro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-(3-trifluoromethyl-phenyl)-urea;

1-(3-{8-[2-(2-Methoxy-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-(3-trifluoromethyl-phenyl)-urea;

1-(4-Chloro-phenyl)-3-{3-[8-(2-isopropyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-(3-Chloro-4-fluoro-phenyl)-3-{3-[8-(2-isopropyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-urea;

1-{3-[8-(4-Bromo-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-3-(4-chloro-phenyl)-urea;

4-Fluoro-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

3-Methoxy-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide

3-Methoxy-4-methyl-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

N-{3-[8-(2-Phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

2,6-Dimethyl-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

4-Fluoro-N-{3-[8-(2-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

3-Methoxy-N-{3-[8-(2-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

3-Methoxy-4-methyl-N-{3-[8-(2-p-tolyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-benzamide;

2-(4-Chloro-phenyl)-N-{3-[8-(2-phenyl-imidazol-1-yl)-imidazo[1,2-a]pyrazin-6-yl]-phenyl}-acetamide;

2-(4-Chloro-phenyl)-N-(3-{8-[2-(4-chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-acetamide;

N-(3-{8-[2-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-2-(3-trifluoromethyl-phenyl)-acetamide;

1-(3-{8-[2-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-(4-morpholin-4-ylmethyl-phenyl)-urea;

1-(4-Chloro-benzyl)-3-(3-{8-[2-(4-chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-urea; or

1-(3-{8-[2-(4-Chloro-phenyl)-imidazol-1-yl]-imidazo[1,2-a]pyrazin-6-yl}-phenyl)-3-[4-(4-methyl-piperazin-1-ylmethyl)-phenyl]-urea.